

Question 1: Find amp and period then graph it.

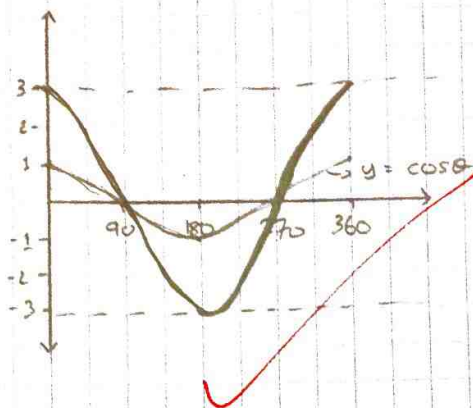
①

$$y = 3 \cos \theta$$

$$\text{amp} = |3| \begin{matrix} \swarrow \text{max } 3 \\ \searrow \text{min } -3 \end{matrix}$$

$$\text{period} = 360$$

θ	$3 \cos \theta$
0	3
90	0
180	-3
270	0
360	3



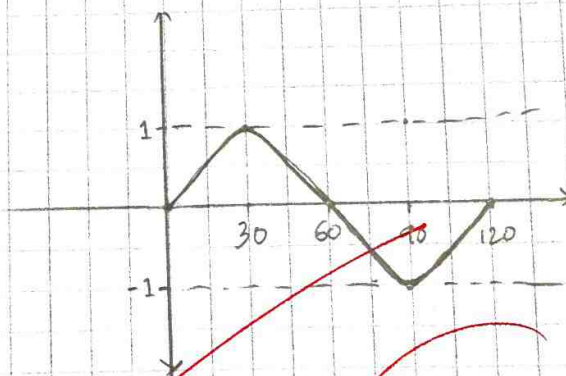
②

$$y = \sin 3\theta$$

$$\text{amp} = |1| \begin{matrix} \swarrow \text{max } 1 \\ \searrow \text{min } -1 \end{matrix}$$

$$\text{Period} = \frac{360}{|b|} = \frac{360}{3} = 120$$

θ	$\sin 3\theta$
0	0
30	1
60	0
90	-1
120	0



③ $y = \tan 4.5 \theta$

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④ $y = 12000 + 8000 \sin \frac{x}{6}$

$$\text{amp} = |20000| \begin{matrix} \swarrow \text{max } 20000 \\ \searrow \text{min } -20000 \end{matrix}$$

so it's 20000

